MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2018/2019

DII5614 – PRINCIPLES OF INVESTMENT

(For Diploma Students Only)

29th MAY 2019
9.00 am – 11.00 am
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **NINE (9)** pages only excluding the cover page and formula appendix.
2. The formulae are given in the appendix.
3. Answer **ALL** questions.
4. Answers for Section A and B should be shaded on the OMR sheet provided.
5. For Section C, write your answer in the answer booklet provided.

SECTION A : MULTIPLE CHOICE QUESTIONS.

Answers should be shaded on the OMR sheets provided. [30 MARKS]

1. Under normal economic conditions, the major source of risk faced by investors who purchase investment grade bonds is _____.
   A. purchasing power risk
   B. interest rate risk
   C. liquidity risk
   D. default risk

2. A single bond issue with multiple maturity dates is called a _____.
   A. callable
   B. bond
   C. premium bond
   D. serial bond

3. Which of the following are advantages of owning bonds?

   I. Diversification properties.
   II. Higher long-term returns than equity holdings.
   III. Current income.
   IV. Relatively low risk.

   A. I and II only.
   B. I, III and IV only.
   C. I, II and III only.
   D. I, II, III and IV.

4. Under which bond provision is the issuer required to retire portions of the bond issue prior to maturity?
   A. Call feature.
   B. Refunding provision.
   C. Subordination clause.
   D. Sinking fund feature.

5. Bonds with one of the top four ratings (AAA through BBB) are designated as _____.
   A. split bonds
   B. investment grade bonds
   C. illiquid bonds
   D. high-yield bonds

Continued ...

6. If a bond rating moves from a BB to a BBB rating, _____.
   A. the bond will still be classified as junk
   B. it must also move from a Ba to a Baa rating
   C. the market yield on the bond will rise
   D. the market price of the bond will rise

7. Which one of the following variables has the **GREATEST** effect on bond prices?
   A. Economic growth.
   B. Interest rates.
   C. Inflation.
   D. Stock market returns.

8. Mary just purchased a bond which pays RM60 a year in interest. What is this RM60 called?
   A. Coupon.
   B. Face value.
   C. Discount.
   D. Call premium.

9. Bazli owns a bond that will pay him RM75 each year in interest plus a RM 1,000 principal payment at maturity. What is the RM 1,000 called?
   A. Coupon.
   B. Face value.
   C. Discount.
   D. Yield.

10. A bond's coupon rate is equal to the annual interest divided by which one of the following?
    A. Call price.
    B. Market price.
    C. Coupon payment.
    D. Clean price.

11. The specified date on which the principal amount of a bond is payable is referred to as which one of the following?
    A. Coupon date.
    B. Yield date.
    C. Maturity.
    D. Dirty date.

Continued ...

12. A RM 1,000 face value bond can be redeemed early at the issuer's discretion for RM 1,030, plus any accrued interest. The additional RM 30 is called which one of the following?
    A. Call price.
    B. Redemption value.
    C. Call premium.
    D. Market price.

13. A bond that has only one payment, which occurs at maturity, defines which one of the following?
    A. Municipal bonds.
    B. Agency bonds.
    C. Corporate bonds.
    D. Zero coupon bonds.

14. The current yield on a bond is equal to _____.
    A. annual interest payment divided by the current market price
    B. the yield to maturity
    C. annual interest divided by the par value
    D. the internal rate of return

15. If a 7.25% coupon bond is trading for RM 982.00, it has a current yield of _____ .
    A. 7.38%
    B. 6.53%
    C. 7.25%
    D. 8.53%

16. The _____ is a measure of the average rate of return an investor will earn if the investor buys the bond now and holds until maturity.
    A. current yield
    B. dividend yield
    C. Price to Earning ratio
    D. yield to maturity

17. The _____ gives the number of shares for which each convertible bond can be exchanged.
    A. conversion ratio
    B. current ratio
    C. Price to Earning ratio
    D. conversion premium

Continued ...

18. A coupon bond that pays interest annually has a par value of RM 1,000 and matures in 5 years. The market value of the bond today is RM890. What is the bond's yield to maturity?
    A. 8.22%
    B. 10.34%
    C. 8.73%
    D. 9.74%

19. A convertible bond has a par value of RM1,000 and a current market price of RM850. The current price of the issuing firm's stock is RM29 and the conversion ratio is 30 shares. The bond's market conversion value is _____.
    A. RM 729
    B. RM 810
    C. RM 870
    D. RM 1,000

20. A 10% coupon bond, annual payments, 10 years to maturity is callable in 3 years at a call price of RM 1,100. If the bond is selling today for RM 975, the yield to call is _____.
    A. 10.26%
    B. 10.00%
    C. 9.25%
    D. 13.98%

21. A convertible bond has a par value of RM 1,000 and a current market value of RM950. The current price of the issuing firm's stock is RM22 and the conversion ratio is 40 shares. The bond's conversion premium is _____.
    A. RM40
    B. RM70
    C. RM190
    D. RM200

Continued ...

22. Which of the following best shows the timeline (unit of time is 6 months period) for cash flows for a three-year bond with face value RM1,000, a coupon rate of 8 percent, and semiannual payments?

A.
```
0       1       2       3
+-------+-------+-------+
        RM80    RM80    RM1,080
```

B.
```
0       1       2       3
+-------+-------+-------+
        RM40    RM40    RM1,040
```

C.
```
0       1       2       3       4       5       6
+-------+-------+-------+-------+-------+-------+
        RM80    RM80    RM80    RM80    RM80    RM1,080
```

D.
```
0       1       2       3       4       5       6
+-------+-------+-------+-------+-------+-------+
        RM40    RM40    RM40    RM40    RM40    RM1,040
```

23. A bond has a par value of RM1,000, a current yield of 7 percent, and semi-annual interest payments. If the bond is selling at RM900. What is the amount of each coupon payment?
    A. RM31.50
    B. RM63.00
    C. RM70.00
    D. RM90.00

24. A 7 year bond has a face value of RM1,000. The bond has a 7 percent semiannual coupon with market price of RM1,040. The bond has a yield to call of 6.5 percent. What is the bond's yield to maturity?
    A. 3.14%
    B. 6.30%
    C. 7.62%
    D. 6.27%

25. A 16-year bond with a 10 percent annual coupon has a current yield of 8 percent. What is the bond's yield to maturity (YTM)?
    A. 6.9%
    B. 7.1%
    C. 7.3%
    D. 7.5%

Continued ...

26. Yield of interest rate which is below than coupon rate, this yield is classified as _____.
    A. yield to maturity
    B. yield to call
    C. yield to earning
    D. yield to investors

27. To earn a high rating from the bond rating agencies, a firm should have _____.
    A. a high times interest earned ratio
    B. a high debt to equity ratio
    C. a high inventory turnover
    D. less default risk and pay lower interest rate

28. The required return on a bond is equal to _____.
    A. the real rate of return plus a risk premium plus an expected inflation premium
    B. the real rate of return plus the coupon rate plus an inflation rate
    C. the risk-free rate plus a risk premium plus an expected inflation premium
    D. the real rate plus a risk premium

29. Which one of the following will tend to cause domestic interest rates to rise?
    A. An increase in the money supply.
    B. A decrease in the rate of inflation.
    C. A decrease in the federal budget deficit.
    D. An increase in interest rates overseas.

30. Which of the following factors will tend to cause the risk free rate to rise?

    I. An increase in the money supply.
    II. An increase in the federal budget deficit.
    III. An increase in the level of economic activity.
    IV. Falling rates in foreign markets.

    A. I, II and III only.
    B. II and III only.
    C. I and IV only.
    D. I, II, III and IV.

Continued ...

SECTION B : TRUE OR FALSE QUESTIONS.

Answers should be shaded on the OMR sheets provided. Shade A for True, and B for False answer. [10 MARKS]

31. If a company issues a bond, the money that they receive in return is a loan, must be repaid over time.
32. Bond markets are bearish when interest rates are low or falling.
33. Purchasing Power Risk is the risk that a bond will be difficult to sell at a reasonable price.
34. Private bond rating agencies assign ratings based upon financial analysis of the bond issuer.
35. Conversion period is the time period during which a convertible issue can be converted.
36. Differences in interest rates between the various market sectors are called yield spreads.
37. Treasury bonds have lower rates than corporate bonds due to no default risk.
38. Freely callable bonds yield lower than noncallable bonds.
39. Required Return is the rate of return an investor must earn on an investment to be fully compensated for its risk.
40. Bond swaps is a measure of bond price volatility, which captures both price and reinvestment risk and which is used to indicate how a bond will react in different interest rate environments.

Continued ...

SECTION C : STRUCTURE QUESTIONS.

Answer ALL question in the answer booklet provided. [60 MARKS]

QUESTION 1

Ms Lee Ying has been following the price movement of stock over the past year and she believes that it is currently undervalue. Ms Lee Ying plans to buy 8,000 shares of Berjaya Berhad at RM 2.35 per share, with a margin of 40%. Assume bank's required margin is 50%.

a. Calculate the value of investment. (1 mark)
b. Calculate the equity margin for this transaction. (1 mark)
c. Suddenly Berjaya Berhad's share price falls to RM 2.20 per share. Calculate the new margin position. (4 marks)
d. Will there be a margin call in part (c.)? If yes, how much is the new debit balance in order to maintain the 50% margin. (4 marks)
e. Calculate the total return on invested capital for Ms Lee Ying if she sells Berjaya Berhad shares at the price of RM 2.85 with the assumption of 8.5% interest charged on margin, and dividend received were RM 0.45 per share. (5 marks)

(Total 15 marks)

QUESTION 2

Below is Miss Maimoon's portfolio, which consists of two types of investment. Answer the following questions to summarise Miss Maimoon's overall portfolio performance.

	Expected Return (%)	
Year	**Common Stock**	**Bond**
2017	7	10
2018	9	8

a. Calculate the expected portfolio return for each of the year. Given portfolio weightage for Common Stock is 75% and Bond is 25%. (6 marks)

b. Calculate the average expected portfolio return over the period. (3.5 marks)

c. Calculate the standard deviation of expected portfolio return. (5.5 marks)

(Total 15 marks)

Continued ...

QUESTION 3

You have been hired as an analyst for Fashion Ballet Sdn. Bhd. and they provided you with the following data for the year ended 2018. You are asked to provide the shareholders with an assessment of the firm's financial ratio.

	RM
Total Current Assets	1,403,000
Fixed Assets	1,709,000
Interest Expense	70,000
Total Current Liabilities	389,000
Account Payable	266,000
Sales	1,509,000
Account Receivable	688,000
Long-Term Debt	454,000
Inventory	555,000
Net Profit Margin	14.05%

Calculate the following ratios :

a. Current ratio (2 marks)
b. Total asset turnover (2 marks)
c. Debt-equity ratio (4 marks)
d. Net Profit (2 marks)
e. Return on Asset (2.5 marks)
f. Return on Equity (2.5 marks)

(Total 15 marks)

QUESTION 4

a. Distinguish between open-end funds and closed-end funds. (4 marks)
b. Explain the **THREE (3)** steps in selecting mutual funds (6 marks)
c. List the **FIVE (5)** attractions of mutual funds (5 marks)

(Total 15 marks)

[TOTAL : 60 marks]

End of Page.

Appendices

1. Margin $= \frac{V-D}{V}$

2. Return on invested capital from a margin transaction

$$= \frac{\text{Total current income received} - \text{Total interest paid on margin loan} + \text{Capital gain/loss}}{\text{Amount of equity at purchase}}$$

3. Risk-free rate = Real rate of return + Expected inflation premium

4. Required return on investment j = Risk-free rate + Risk premium for investment j

5. HPR $= \frac{\text{Income during period} + \text{Capital gain/loss during period}}{\text{Beginning investment value}}$

6. $FV = PV\,(1 + r)^n$

7. $D_1 = D_0\,(1 + g)^n$

8. Standard Deviation $= \sqrt{\frac{\sum_{t=1}^{n}(ri - \bar{r})^2}{n-1}}$

9. Portfolio return $= \sum_{j=1}^{n}(w_j \times r_j)$

10. $r_j = R_F + [\, b_j \times (r_m - R_F)\,]$

11. Portfolio beta $= \sum_{j=1}^{n}(w_j \times b_j)$

12. EPS $= \frac{\text{Net Income} - \text{Preferred dividends}}{\text{Number of shares of common stock outstanding}}$

13. Dividend yield $= \frac{\text{Anual dividends received per share}}{\text{Current market price of the stock}}$

14. Dividend payout ratio $= \frac{\text{Dividends per share}}{\text{Earnings per share}}$

15. Total returns

= Current income + Capital gains/losses ± Changes in currency exchange rates

16. Current ratio $= \frac{\text{Current assets}}{\text{Current liabilities}}$

17. Net working capital = Current assets – Current liabilities

18. Accounts receivable turnover = $\frac{\text{Annual sales}}{\text{Accounts receivable}}$

19. Inventory turnover = $\frac{\text{Annual sales}}{\text{Inventory}}$

20. Total asset turnover = $\frac{\text{Annual sales}}{\text{Total assets}}$

21. Debt-equity ratio = $\frac{\text{Long-term debt}}{\text{Stockholders' equity}}$

22. Time interest earned = $\frac{\text{EBIT}}{\text{Interest expenses}}$

23. Net profit margin = $\frac{\text{Net profit after taxes}}{\text{Total revenue}}$

24. ROA = $\frac{\text{Net profit after taxes}}{\text{Total assets}}$

25. ROE = $\frac{\text{Net profit after taxes}}{\text{Stockholders' equity}}$

26. P/E = $\frac{\text{Net price of common stock}}{\text{EPS}}$

27. PEG ratio = $\frac{\text{Stock's P/E ratio}}{\text{3-to-5 year growth rate in earnings}}$

28. Dividend per share = $\frac{\text{Annual dividend paid to common stock}}{\text{Number of common shares outstanding}}$

29. Payout ratio = $\frac{\text{Dividends per share}}{\text{Earnings per share}}$

30. Book value per share = $\frac{\text{Common stockholders' equity}}{\text{Number of common shares outstanding}}$

31. Price-to-book-value = $\frac{\text{Market price of common stock}}{\text{Book value per share}}$

32. Taxable equivalent yield = $\frac{\text{Yield on municipal bond}}{\text{1-Federal tax rate}}$

33. Taxable equivalent yield for both federal and state taxes

$$= \frac{\text{Municipal bond yield}}{1-[\text{Federal tax rate} + \text{state tax rate } (1 - \text{Federal tax rate})]}$$

34. Conversion value = Conversion ratio x Current market price of the stock

35. Conversion equivalent $= \frac{\text{Current market price of the convertible bond}}{\text{Conversion ratio}}$

36. Conversion premium (in RM)

= Current market price of the convertible bond – Conversion value

37. Conversion premium (in %) $= \frac{\text{Conversion premium (in RM)}}{\text{Conversion value}}$

38. Payback period =

$$\frac{\text{Conversion premium (in RM)}}{\text{Annual interest income from the convertible bond} - \text{Annual dividend income from the underlying common stock}}$$

39. Current yield $= \frac{\text{Annual interest income}}{\text{Current market price of the bond}}$

40. Yield to maturity $= \frac{\text{Annual interest} + \frac{\text{Par value} - \text{Market price}}{\text{Number of years to maturity}}}{\frac{\text{Par value} + \text{market price}}{2}}$

41. Yield to call $= \frac{\text{Annual interest} + \frac{\text{Call price} - \text{Market price}}{\text{Number of years to call}}}{\frac{\text{Call price} + \text{market price}}{2}}$

42. Premium (or discount) $= \frac{\text{Share price} - \text{NAV}}{\text{NAV}}$

43. HPR =

$$\frac{(\text{Number of shares at end of period x Ending price}) - (\text{Number of shares at beginning of period x Initial price})}{\text{Number of shares at beginning of period x Initial price}}$$

44. NAV $= \frac{\text{Fund assets} - \text{Fund liabilities}}{\text{Number of units outstanding}}$